

WHAT IS CLAIMED IS:

- 1 1. A system for receiving electromagnetic and optical signals comprising:
2 a first reflecting device for reflecting the electromagnetic and optical signals;
3 an electromagnetic receiver for receiving the reflected electromagnetic waves,
4 wherein the electromagnetic receiver comprises a second reflecting device for reflecting the
5 optical signals; and
6 an optical receiver for receiving the optical signals reflected from the
7 electromagnetic receiver.
- 1 2. The system of claim 1, wherein the first reflecting device comprises a
2 parabolic dish.
- 1 3. The system of claim 1, wherein the first reflecting device comprises a
2 material to reflect the optical signals.
- 1 4. The system of claim 3, wherein the material comprises a mirror-like
2 material.
- 1 5. The system of claim 1, wherein the first reflecting device comprises a
2 material to reflect the electromagnetic signals.
- 1 6. The system of claim 5, wherein the material comprises a metallic
2 material.
- 1 7. The system of claim 6, wherein the metallic material is polished to
2 reflect optical signals.
- 1 8. The system of claim 1, wherein the optical signals comprise infrared
2 signals.
- 1 9. The system of claim 1, wherein the electromagnetic signals comprise
2 radio frequency signals.
- 1 10. The system of claim 1, wherein the electromagnetic signals comprise
2 microwave signals.

1 11. The system of claim 1, wherein the second reflecting device comprises
2 a material capable of reflecting optical signals.

1 12. The system of claim 12, wherein the material comprises a mirror-like
2 substance.

1 13. The system of claim 1, wherein the first reflecting device reflects the
2 electromagnetic and optical rays to a focus area, wherein the focus area includes the
3 electromagnetic receiver.

1 14. The system of claim 1, further comprising a transmitting system
2 comprising an optical transmitter.

1 15. The system of claim 1, wherein the electromagnetic receiver is
2 designed to transmit electromagnetic signals.

1 16. A system for receiving electromagnetic and optical signals comprising:
2 a receiver designed to receive the electromagnetic signals, wherein the
3 receiver includes an aperture where the electromagnetic signals are received through;
4 at least one lens covering at least a portion of the aperture, wherein the lens is
5 designed to bend the optical signals;
6 at least one optical receiver designed to receive the bent optical signals; and
7 an electromagnetic receiver designed to receive the electromagnetic signals
8 received by the receiver.

1 17. The system of claim 16, wherein the receiver comprises a horn.

1 18. The system of claim 16, wherein the optical signals comprise infrared
2 signals.

1 19. The system of claim 16, wherein the electromagnetic signals comprise
2 radio frequency signals.

1 20. The system of claim 16, wherein the electromagnetic signals comprise
2 microwave signals.

1 21. The system of claim 16, wherein the lens is designed to allow
2 electromagnetic signals to pass through the lens.

1 22. The system of claim 16, further comprising a transmitting system
2 comprising an optical transmitter.

1 23. The system of claim 16, wherein the electromagnetic receiver is
2 designed to transmit electromagnetic signals.

1 24. A broadband communications system for receiving electromagnetic
2 and optical signals comprising:

3 a parabolic dish for reflecting the electromagnetic and optical signals to a
4 focus area, the parabolic dish comprising an aperture;

5 an electromagnetic receiver located in the focus area for receiving the reflected
6 electromagnetic waves, wherein the electromagnetic receiver comprises a reflecting device
7 for reflecting the optical signals through the aperture; and

8 an optical receiver for receiving the optical signals reflected through the
9 aperture from the electromagnetic receiver.

1 25. The system of claim 24, wherein the optical signals comprise infrared
2 signals.

1 26. The system of claim 24, wherein the electromagnetic signals comprise
2 radio frequency signals.

1 27. The system of claim 24, wherein the electromagnetic signals comprise
2 microwave signals.